

Weigh In Motion



**We make
highways
talk™**

- **MANAGEMENT**
- **SAFETY**
- **PRESERVATION**

International Road Dynamics Inc. develops and maintains traffic management products and systems technology that make highways talk. What are they saying? They are providing information that roadway administrators need to manage traffic, preserve infrastructure and provide safety warnings to drivers.

IRD's multi-discipline, innovative and customer-focused team is expert in advanced technologies, advanced traffic solutions and custom-designed systems.



MAY 2002, REV. B
PRINTED IN CANADA

INTERNATIONAL ROAD DYNAMICS INC.
www.irdinc.com

WIM MAT MODEL 8000 (WEIGH-IN-MOTION MAT)

**NEW!
WINDOWS XP
SOFTWARE**

OVERVIEW

The IRD Weigh-In-Motion MAT (WIM MAT) Model 8000 is a portable weighing system designed for low speed weighing. The WIM MAT system monitors and records truck wheel, axle, and gross vehicle weights, vehicle speeds, and measures the distance between axles. The WIM MAT Model 8000 is a completely portable, lightweight, slow speed and static truck weighing scale that can be transported in the trunk of a car or back of a truck.



ADVANTAGES

Economical	Low cost and quick return on investment
Efficient	Quick set up time (10 minutes)
Robust	Capable of screening hundreds of trucks per day nonstop
Light weight	Each WIM MAT weighing sensor weighs only 11 kg (25 lb)
Screening	Automatically separates overweight vehicles from vehicles within weight regulations
Safe	Low profile weighing pads reduce danger to users
Portable	Entire system can be transported in the trunk of a car or back of a small truck
Versatile Software	Multiple language capability: English, Spanish and Portuguese Measure in: Metric, Imperial (lbs & inches) or Imperial (kips and feet) Print/save vehicle records for future reference Automatic vehicle classification and compliance checking Search for vehicle records by: driver id, vehicle id, record number, axle weight and axle spacings

APPLICATIONS

Random spot checks	Use the WIM MAT to enforce various locations to prevent overloading on secondary roads and bypass routes
Mobile weigh station	Use the WIM MAT to enforce areas where permanent weigh stations do not exist
Preliminary weight checks	Private companies can use the WIM MAT to check their truck weights prior to travelling on public highways
Prescreening for weigh stations	Use the WIM MAT to pre-weigh vehicles and direct only suspected violators to report to the weigh station

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WIM MAT 8000

SYSTEM COMPONENTS

Each WIM MAT system consists of the following components:

- 2 WIM MAT sensors
- 2 rubber cushioning pads (placed under WIM MAT sensors)
- 12 levelling pads (to keep other axles level with weighing axle)
- 1 inverter (to connect to vehicle lighter outlet for power)
- 1 portable computer (processor)
- 2 protective carrying cases for WIM MAT Sensors
- 1 WIM MAT Interface box
- 1 protective carrying case for computer and accessories
- 2 coaxial cables (to link sensors to computer)
- 1 software package (operating system)
- 1 printer with battery



SPECIFICATIONS

ACCURACY

The gross vehicle weight readings will meet the following accuracy, based on one standard deviation:

- Dynamic 3% of verified static GVW up to 10 km/h (6 mph)

Note: The above accuracy specification shall be based on a minimum of 30 runs of a standard test vehicle, in repeat runs over the system. Any vehicle that traverses the scale with more than a 10% speed variation or variable loads (live or liquid) shall not be considered. The accuracies shall only be considered when the site and vehicle conditions, at minimum, meet those identified in ASTM E1318-00. The system shall be calibrated prior to running the vehicle passes.

PROCESSOR

- Laptop computer based

SYSTEM OPERATING TEMPERATURE RANGE

- -25 to 60°C (-13 to 140°F) ambient for sensors
- 0 to 60°C (32 to 140°F) for interface electronics
- 5 to 35°C (41 to 96°F) for laptop and printer

OPERATING SYSTEM

- Microsoft Windows XP

POWER

- Battery
- External power: AC mains or DC from vehicle lighter outlet

SYSTEM ACTIVATION

- Manually or automatically (user definable)

SPEED RANGE

- 0 to 10 km/h (0 to 6 mph)

AXLE CAPACITY

- Nominal Weighing Capacity (within stated accuracy range) up to 20 tonnes (44,800 lbs) per axle for tire pressures less than 125 psi

WIM MAT SENSOR DIMENSIONS

- 122 cm long x 44.5 cm wide x 1 cm thick (48 in x 17.5 in x 0.4 in)

WIM MAT SENSOR WEIGHT

- 11 kg (25 lb)

LEVELLING PAD DIMENSIONS

- 91.5 cm long x 61 cm wide x 1.3 cm thick (36 in x 24 in x 0.5 in)

LEVELLING PAD WEIGHT

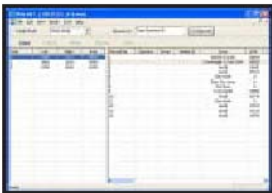
- 8 kg (17 lb)

CUSHIONING PAD DIMENSIONS

- 114 cm long x 45 cm wide x 0.3 cm thick (45 in x 18 in x 0.1 in)

CUSHIONING PAD WEIGHT

- 2 kg (4.4 lb)



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FEBRUARY 2003 REV. A
PRINTED IN CANADA

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TCC 540 WIM

Portable Weigh-In-Motion Counter/Classifier



International Road Dynamics Inc. (IRD) is proud to introduce the IRD TCC 540 WIM, a comprehensive unit which combines all of the features of the IRD TCC 540 traffic counter and classifier with the added function of Weigh-in-Motion (WIM).

With the added Weigh-in-Motion feature, the IRD TCC 540 WIM can now provide more in-depth information and data for your traffic planning. Data can be grouped according to classification, speed, time, or weight, depending on your needs.



FEATURES

- Completely portable - Can be used at temporary or permanent sites
- Powered by AC/DC or solar (optional)
- Low cost and lightweight
- Data collection for up to 8 lanes of Piezoelectric WIM
- User-friendly software
- Comprehensive reporting capabilities
- Program and download data via laptop, PC or modem

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TCC 540 WIM WEIGH-IN-MOTION COUNTER/CLASSIFIER

Specifications

Capabilities:	Count up to 16 lanes, classify up to 8 lanes or weigh up to 8 lanes. Collect vehicle count, classification, gap, headway, speed, length, speed by axle, speed by length, axle weight, and gross weight information.
Counting Modes:	Time Interval - collect and sort data by user-defined time intervals
Classification Modes:	Binning - user definable up to 30 speed, 30 axle, 30 headway and 30 gap bins, speed by axle and speed by length, FHWA Scheme "F" default Individual Vehicle Records (Raw) - time of passage to 1/100 second, speed to 1/100 mph or kph, number of axles and axle spacing for each vehicle stored in memory (Data for approximately 5000 vehicles can be stored in 68K of memory using this mode)
Special Modes:	Time Stamp - sensor activations (accurate to 1/10695 of a second) stored in memory
WIM Modes:	WIM: Individual Vehicle Records (as defined above) plus axle weight and gross vehicle weights WIM + Bin: Binning plus WIM Autocalibration capabilities
Sensor Configurations:	Piezo Piezo Loop Loop Piezo Loop Piezo Loop Piezo Loop Loop Piezo Piezo Loop Piezo Piezo Loop Loop Piezo Loop Piezo
Vehicle Classification:	User definable (customized) and default standard classification schemes
Recording Intervals:	Can have up to 5 different intervals per day with interval lengths from 1 minute to 24 hours
Data Retrieval:	Through telephone modem, IBM compatible computer, or handheld "Datahog" device
Standard Model Configurations:	Multiple combinations of loops, road tubes, DYNAX® sensors and piezoelectric inputs for permanent or portable use
Programming:	From counter keypad and display, IBM compatible computer, or remotely with telephone modem
Telemetry:	Ready with addition of external modem; standard RS-232 port with speeds from 300 to 19,200 baud; cellular option
Units:	User selectable metric or US units
Time & Date:	Multi-year calendar with leap year and Daylight Savings Time adjustment
Sensor Inputs:	4-16 loops (30-500 microhenries), 8 piezoelectric sensors (for WIM or axle count), 8 IRD DYNAX® Sensors
Memory:	1Mb RAM standard with 32 Mb additional on WIM board
Serial Outputs:	2 Serial output ports: Standard control, data transfer Send vehicle record data out
Alarms:	Send alarm output to device - Can program up to 4 WIM alarms which activate the alarm outputs (optional) on the WIM board
Keypad:	16 keys fully sealed and weatherproofed; optional units with no keyboard/display can be programmed and monitored from any IBM-compatible laptop or desktop computer
Display:	Liquid Crystal Display, 4 line by 20 characters, alphanumeric
Temperature Sensing:	Internal temperature sensor, road temperature sensing (optional)
Electronics:	Low power, microprocessor-based, modular construction, plug-in printed circuit boards for easy serviceability
Power:	6 volt, 12-amp hour rechargeable lead acid gel type battery, optional dual battery unit, inadvertent power-off protection to prevent data loss, solar option
Environmental:	0°C to 70°C (+32°F to 158°F), 20 to 90% non-condensing relative humidity
Case:	10 gauge (2.6 mm, 0.102") welded aluminum, ANSI 70 grey powder paint finish, lockable, splashproof enclosure with Military spec connectors
Size:	27 cm x 36 cm x 18 cm (10.75" x 14" x 7")
Weight:	6.8 kg (15 lb)



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